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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,877	10/21/2003	Mizuki Murata	2257-0236P	9350

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,877

Applicant(s)

MURATA, MIZUKI

Examiner

Kevin Quarterman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 3, 5 and 6 is/are rejected.
7) ☒ Claim(s) 2 and 4 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1003.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following title is suggested: --SHADOW MASK FOR COLOR CATHODE RAY TUBE HAVING REAL/DUMMY BRIDGE STRUCTURE AND COLOR CATHODE RAY TUBE--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Shin (US 6,614,154).
5. Regarding independent claim 1, Figures 6 and 7 of Shin '154 show a shadow mask for a color cathode ray tube comprising a plurality of strips (41); real bridges (42) for connecting the strips adjacent to each other; and dummy bridges (44a, 44b) formed in cantilevered fashion on a side part of the strips, wherein a region in which only the dummy bridges are present among the dummy bridges and the real bridges is defined as a first region, and a mixed region having the dummy bridges and the real bridges is

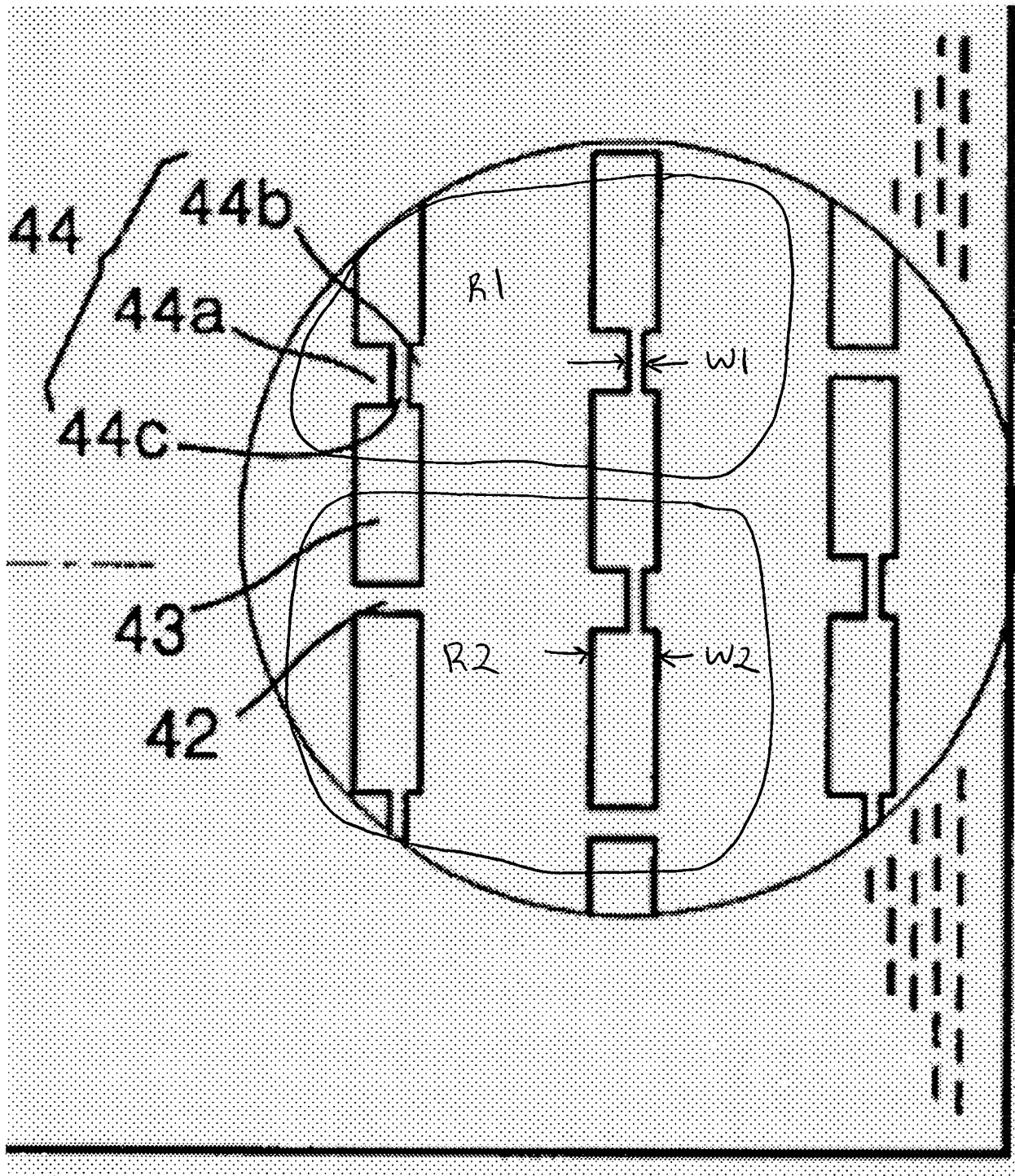
defined as a second region, and wherein the size of the dummy bridges (44a) in the first region is greater than the size of the dummy bridges (44b) in the second region.

6. The Examiner notes that the term "region" is defined as an indefinite area or an open connected set together with none, some, or all of the points of its boundary (Merriam-Webster's Collegiate Dictionary, 10th Ed.). Since claims are given their broadest reasonable interpretation (MPEP § 2111), the regions may be arbitrarily defined.

7. Thus, Figure 1 illustrates a reproduced portion of Fig. 7 of Shin '154 showing a first region R1 in which only the dummy bridges are present and a second mixed region R2 having both the dummy bridges and the real bridges.

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Figure 1



8. Regarding independent claim 3, Figures 6 and 7 of Shin '154 shows a shadow mask for a color cathode ray tube comprising a plurality of strips (41) and real bridges (42) connecting the strips adjacent to each other, wherein a striped mask region devoid of the real bridges is defined as a first region, and a region having the real bridges is defined as a second region, and wherein a slit opening width in the first region is less than a slit opening width in the second region. Also, see Examiner's discussion (§ 6) for the term "region" cited earlier in this office action.

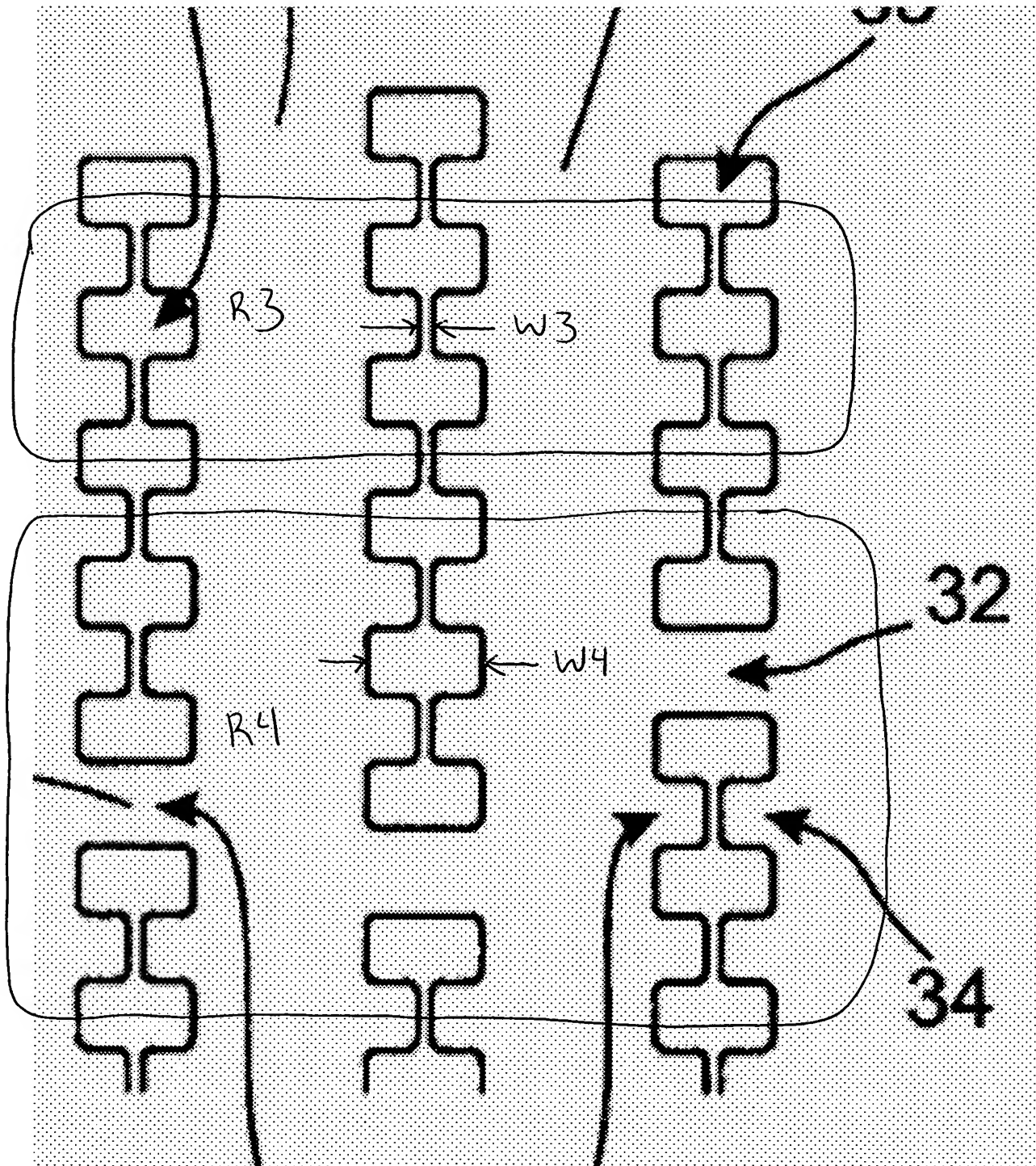
9. Figure 1 also shows the first region R1 devoid of real bridges and the second region R2 having the real bridges. The figure also shows a slit opening width W1 in the first region being less than a slit opening width W2 in the second region.

10. Claims 3 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Shin (US 6,630,775).

11. Regarding independent claim 3, Figure 4 of Shin '775 shows a shadow mask for a color cathode ray tube comprising a plurality of strips (31) and real bridges (32) connecting the strips adjacent to each other, wherein a striped mask region devoid of the real bridges is defined as a first region, and a region having the real bridges is defined as a second region, and wherein a slit opening width in the first region is less than a slit opening width in the second region.

12. Figure 2 illustrates a portion of Fig. 4 of Shin '775 showing the first region R3 devoid of real bridges and the second region R4 having the real bridges. The figure also shows a slit opening width W3 in the first region being less than a slit opening width W4 in the second region.

Figure 2



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13. Regarding independent claim 6, Shin '775 discloses a color cathode ray tube comprising a glass tube body having a faceplate panel and a shadow mask provided inside the faceplate panel (col. 2, ln. 22-27), the shadow mask including a plurality of strips (31) and real bridges (32) connecting the strips adjacent to each other, wherein a striped mask region devoid of the real bridges is defined as a first region, and a region having the real bridges is defined as a second region, and wherein a slit opening width in the first region is less than a slit opening width in the second region. Also, see Examiner's discussion (§ 6) for the term "region" cited earlier in this office action.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin (US 6,630,775) in view of Shin (US 6,614,154).

16. Regarding independent claim 5, Shin '775 discloses a shadow mask for a color cathode ray tube comprising a glass tube body having a faceplate panel and a shadow mask provided inside the faceplate panel (col. 2, ln. 22-27), the shadow mask including a plurality of strips (31); real bridges (32) for connecting the strips adjacent to each other; and dummy bridges (34) formed in cantilevered fashion on a side part of the strips, wherein a region in which only the dummy bridges are present among the

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dummy bridges and the real bridges is defined as a first region, and a mixed region having the dummy bridges and the real bridges is defined as a second region.

17. Figure 2 illustrates a reproduced portion of Fig. 4 of Shin '775 showing a first region R1 in which only the dummy bridges are present and a second mixed region R2 having both the dummy bridges and the real bridges.

18. Shin '775 teaches the claimed limitations of independent claim 5, as discussed earlier, but fails to exemplify the size of the dummy bridges in the first region being greater than the size of the dummy bridges in the second region.

19. Shin '154 teaches that it is known in the art to provide color cathode ray tubes with a shadow mask having dummy bridges in a first region with a size greater than the size of the dummy bridges in a second region, as also discussed for independent claim 1, for improving visibility of the real bridge and the dummy bridge appearing on an image (col. 11, ln. 2-4).

20. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the shadow mask of Shin '775 with dummy bridges in a first region having a size greater than that of dummy bridges in a second region, as taught by Shin '154, for improving the efficiency of the device.

Allowable Subject Matter

21. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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22. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 2 and 4, which depends upon independent claims 1 and 3 respectively, the prior art of record neither shows or suggests a shadow mask comprising, in addition to other limitations of the base independent claims, a vertical dimension of the first region being greater than 50 percent of the vertical dimension of the shadow mask.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim (US 6,437,496) discloses a tensioned shadow mask. Kim (US 6,472,806) discloses a tensioned shadow mask with tie bars having dummy bridges. Choe (US 6,762,545) discloses a tension mask for color CRT. Shin (US 6,724,137) discloses a tension mask assembly for color CRT. Bae (US 6,614,153) discloses a mask for a color picture tube.


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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kevin Quarterman
Examiner
Art Unit 2879

kq
25 April 2005